

SEQUENCE LISTING

<110> THE GENERAL HOSPITAL CORPORATION
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 BELHAM, Christopher
 AVRUCH, Joseph

<120> Identification of Inhibitors of Mitosis

<130> MGH-006.1 PCT

<150> US 60/387,810

<151> 2002-06-11

<160> 35

<170> PatentIn version 3.2

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<211> 2937

<212> DNA

<213> Homo sapiens

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Glu Leu His Tyr Ile Pro Ile Arg Val Leu Gly Arg Gly Ala Phe Gly
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Glu Ala Thr Leu Tyr Arg Arg Thr Glu Asp Asp Ser Leu Val Val Trp
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Leu Asn Glu Ile Val Ile Leu Ala Leu Leu Gln His Asp Asn Ile Ile
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Ala Tyr Tyr Asn His Phe Met Asp Asn Thr Thr Leu Leu Ile Glu Leu
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Glu Tyr Cys Asn Gly Gly Asn Leu Tyr Asp Lys Ile Leu Arg Gln Lys
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Asp Lys Leu Phe Glu Glu Glu Met Val Val Trp Tyr Leu Phe Gln Ile
 145 150 155 160

Val Ser Ala Val Ser Cys Ile His Lys Ala Gly Ile Leu His Arg Asp
 165 170 175

Ile Lys Thr Leu Asn Ile Phe Leu Thr Lys Ala Asn Leu Ile Lys Leu
 180 185 190

Gly Asp Tyr Gly Leu Ala Lys Lys Leu Asn Ser Glu Tyr Ser Met Ala
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Glu Thr Leu Val Gly Thr Pro Tyr Tyr Met Ser Pro Glu Leu Cys Gln
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Gly Val Lys Tyr Asn Phe Lys Ser Asp Ile Trp Ala Val Gly Cys Val
 225 230 235 240

Ile Phe Glu Leu Leu Thr Leu Lys Arg Thr Phe Asp Ala Thr Asn Pro
 245 250 255

Leu Asn Leu Cys Val Lys Ile Val Gln Gly Ile Arg Ala Met Glu Val
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 275 280 285

Leu Asp Gln Asp Pro Glu Gln Arg Pro Thr Ala Asp Glu Leu Leu Asp
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Leu Leu Asn Ala Pro Thr Lys Arg Pro Arg Ser Ser Thr Val Thr Glu
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Ala Pro Ile Ala Val Val Thr Ser Arg Thr Ser Glu Val Tyr Ile Trp
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Cys Ser Ala Arg Gln Val Cys Ala Gly Asn Thr His Phe Ala Val Val
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Lys Leu His Gly Gln Leu Gly His Gly Asp Lys Ala Ser Tyr Arg Gln
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Pro Lys His Val Glu Lys Leu Gln Gly Lys Ala Ile His Gln Val Ser
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Lys Cys Gly Gln Leu Gly Val Gly Asn Tyr Lys Lys Arg Leu Gly Ile
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Asn Leu Leu Gly Gly Pro Leu Gly Gly Lys Gln Val Ile Arg Val Ser
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Arg Pro His Gly Ser Asp Ile Cys Thr Ser Trp Pro Arg Pro Ile Phe
690 695 700

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725 730 735

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740 745 750

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755 760 765

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770 775 780

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785 790 795 800

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805 810 815

Glu Asn Ala Glu Phe Ile Pro Met Pro Asp Ser Pro Ser Pro Leu Ser
820 825 830

Ala Ala Phe Ser Glu Ser Glu Lys Asp Thr Leu Pro Tyr Glu Glu Leu
835 840 845

Gln Gly Leu Lys Val Ala Ser Glu Ala Pro Leu Glu His Lys Pro Gln
850 855 860

Val Glu Ala Ser Ser Pro Arg Leu Asn Pro Ala Val Thr Cys Ala Gly
865 870 875 880

Lys Gly Thr Pro Leu Thr Pro Pro Ala Cys Ala Cys Ser Ser Leu Gln
885 890 895

Val Glu Val Glu Arg Leu Gln Gly Leu Val Leu Lys Cys Leu Ala Glu
900 905 910

Gln Gln Lys Leu Gln Gln Glu Asn Leu Gln Ile Phe Thr Gln Leu Gln
915 920 925

Lys Leu Asn Lys Lys Leu Glu Gly Gly Gln Gln Val Gly Met His Ser
 930 935 940

Lys Gly Thr Gln Thr Ala Lys Glu Glu Met Glu Met Asp Pro Lys Pro
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 35 40 45

Lys Lys Ile Gly Arg Gly Gln Phe Ser Glu Val Tyr Lys Ala Thr Cys
 50 55 60

Leu Leu Asp Arg Lys Thr Val Ala Leu Lys Lys Val Gln Ile Phe Glu
 65 70 75 80

Met Met Asp Ala Lys Ala Arg Gln Asp Cys Val Lys Glu Ile Gly Leu
 85 90 95

Leu Lys Gln Leu Asn His Pro Asn Ile Ile Lys Tyr Leu Asp Ser Phe
 100 105 110

Ile Glu Asp Asn Glu Leu Asn Ile Val Leu Glu Leu Ala Asp Ala Gly
 115 120 125

Asp Leu Ser Gln Met Ile Lys Tyr Phe Lys Lys Gln Lys Arg Leu Ile
 130 135 140

Pro Glu Arg Thr Val Trp Lys Tyr Phe Val Gln Leu Cys Ser Ala Val
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Glu His Met His Ser Arg Arg Val Met His Arg Asp Ile Lys Pro Ala
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Asn Val Phe Ile Thr Ala Thr Gly Val Val Lys Leu Gly Asp Leu Gly
 180 185 190

Leu Gly Arg Phe Phe Ser Ser Glu Thr Thr Ala Ala His Ser Leu Val
 195 200 205

Gly Thr Pro Tyr Tyr Met Ser Pro Glu Arg Ile His Glu Asn Gly Tyr
 210 215 220

Asn Phe Lys Ser Asp Ile Trp Ser Leu Gly Cys Leu Leu Tyr Glu Met
 225 230 235 240

Ala Ala Leu Gln Ser Pro Phe Tyr Gly Asp Lys Met Asn Leu Phe Ser
 245 250 255

Leu Cys Gln Lys Ile Glu Gln Cys Asp Tyr Pro Pro Leu Pro Gly Glu
 260 265 270

His Tyr Ser Glu Lys Leu Arg Glu Leu Val Ser Met Cys Ile Cys Pro
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906

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 35 40 45

Tyr Arg Ala Ala Cys Leu Leu Asp Gly Val Pro Val Ala Leu Lys Lys
 50 55 60

Val Gln Ile Phe Asp Leu Met Asp Ala Lys Ala Arg Ala Asp Cys Ile
 65 70 75 80

Lys Glu Ile Asp Leu Leu Lys Gln Leu Asn His Pro Asn Val Ile Lys
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Tyr Tyr Ala Ser Phe Ile Glu Asp Asn Glu Leu Asn Ile Val Leu Glu
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Leu Ala Asp Ala Gly Asp Leu Ser Arg Met Ile Lys His Phe Lys Lys
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Gln Lys Arg Leu Ile Pro Glu Arg Thr Val Trp Lys Tyr Phe Val Gln
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Leu Cys Ser Ala Leu Glu His Met His Ser Arg Arg Val Met His Arg
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Asp Ile Lys Pro Ala Asn Val Phe Ile Thr Ala Thr Gly Val Val Lys
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 195 200 205

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Leu Leu Tyr Glu Met Ala Ala Leu Gln Ser Pro Phe Tyr Gly Asp Lys
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Met Asn Leu Tyr Ser Leu Cys Lys Lys Ile Glu Gln Cys Asp Tyr Pro
 245 250 255

Pro Leu Pro Ser Asp His Tyr Ser Glu Glu Leu Arg Gln Leu Val Asn
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Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys Lys Phe Glu Leu
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Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr Asp Ala Leu Asp
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 165 170 175

Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln Ile Asp Lys Tyr
 180 185 190

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<223> Serine is a phosphorylation site of murine Nek7

<400> 27

Cys Ala Ala His Ser Leu Val Gly Thr Pro Tyr Tyr Met
1 5 10

<210> 28
<211> 9
<212> DNA
<213> Homo sapiens

<400> 28

ccgccatgt

9

<210> 29
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<212> DNA
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<400> 29
aataaa

6

<210> 30
<211> 14
<212> PRT
<213> Mus musculus

<400> 30

Ala Gly Gln Pro Ser His Met Pro His Gly Gly Ser Pro Asn
1 5 10

<210> 31
<211> 13
<212> PRT
<213> artificial

<220>
<223> polypeptide for raising antibodies to Nek6

<220>
<221> MISC_FEATURE
<222> (10)...(10)
<223> Threonine is a phosphorylation site of Nek6

<400> 31

Cys Gly Arg Phe Phe Ser Ser Glu Thr Thr Ala Ala His
1 5 10

<210> 32
<211> 21
<212> DNA
<213> artificial

<220>
<223> PCR forward primer for analysis of Nek6 RNA

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21

<210> 33
<211> 21
<212> DNA
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<220>

<223> PCR reverse primer for analysis of Nek6 RNA

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21

<210> 34

<211> 21

<212> DNA

<213> artificial

<220>

<223> PCR forward primer for analysis of TATA box binding protein RNA

<400> 34

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21

<210> 35

<211> 21

<212> DNA

<213> artificial

<220>

<223> PCR reverse primer for analysis of TATA box binding protein RNA

<400> 35

gcacggtatg agcaactcac a

21